

Attorney Docket No.: A0312/7393 SJH

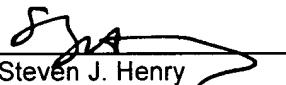
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Geoffrey T. Haigh and Baoxing Chen  
Serial No: 09/838,520 /  
Confirmation No.: 9453  
Filed: April 19, 2001  
For: NON-OPTICAL SIGNAL ISOLATOR

Examiner: R. Deberadinis  
Art Unit: 2836

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, Washington, D.C. 20231, on the 5 day of September, 2002.

  
Steven J. Henry  
Reg. No. 27,900

COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

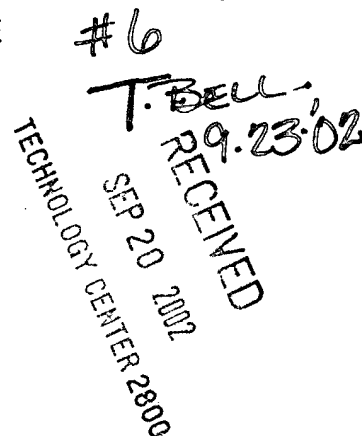
Sir:

**REQUEST FOR RECONSIDERATION**

In response to the Office Action mailed July 31, 2002, Applicant respectfully requests reconsideration.

In the above-referenced Action, claims 14-27 have all been rejected on the basis of obviousness-type double patenting over claims of U.S. Patent 6,087,882 in view of Gutierrez and Douglass. Applicant respectfully disagrees; it should not be subject to a terminal disclaimer requirement as none of these claims are, in fact, obvious over the claims of U.S. Patent 6,087,882.

With respect to claim 14, for example, the Examiner notes that Chen '882 does not disclose a second passive component being a coil. In the face of this observation, the logic supporting the obviousness determination is that (1) Chen does disclose that transformer based isolators are known and (2) Gutierrez discloses an integrated circuit transformer (wherein, obviously, the first and second passive components are coils). This leads to the erroneous conclusion that "[i]t would have been obvious to one having ordinary skill in the art at the time of this invention to design a signal isolator comprising,



an integrated circuit transformer wherein the second passive component is a coil to provide a transformer based isolator."

To understand the fatal flaw in the reasoning, we have to start with the initial premise that Chen discloses that "transformer based isolators are known" and examine it in proper context. The context is this: lines 20-22 of column 1 of Chen merely state that "There are three commonly known isolation methods: opto-couplers, capacitively coupled isolators, and transformer based isolators." Continuing in that column, Chen goes on to state that

"transformer-based isolators are essentially AC coupled, and have limitations in their size and the ability to reject common mode voltage transience. All of the three types of isolators suffer from their difficulties in IC integration, and sometimes they even require hybrid packaging."

After establishing these problems, Chen then proceeds to discuss, as a more favorable alternative, a new isolation technique based on GMR resistors. Chen presents the use of GMR-based isolation as a solution to such drawbacks of the prior art, and describes a monolithic digital isolator which consists of a driver circuit, on-chip coils, on-chip spin-valve sensing elements (i.e., GMR elements) and a receiver circuit.

Consequently, though Chen et al acknowledges their existence, the reference specifically teaches away from using a transformer-based isolation architecture. There is no hint whatever in Chen to use anything other than spin-valve elements to sense the magnetic field generated by coil L1. To the extent that Chen teaches or suggests alternatives, they are alternative spin-valve resistor arrangements. Chen et al note that although the sensor is shown as a bridge circuit, a single GMR spin-valve element or two spin-valve elements may be employed instead, and four elements can be arranged in a manner other than as a bridge. Column 5, lines 11-16. However, they *never* suggest that a coil or coils can be used *instead of* spin-valve resistors. Manifestly, therefore, Chen et al teaches *away* from the claimed invention and it is not properly combinable with Gutierrez or Douglass to arrive at the claimed invention. Certainly, the

express teaching away defeats any argument that Chen et al would suggest the combination. Neither do the other references suggest the combination. An express teaching of the combination must be found somewhere and lacking same, the rejection must be withdrawn. In re Sang Su Lee (Fed. Cir. 2002).

Applicant therefore requests that the rejection be withdrawn and that all claims now be allowed.

The requirements for correction of the drawings has been noted and corrected drawings will be furnished separately.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,



Steven J. Henry  
Reg. No. 27,900  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, MA 02210-2211  
(617)720-3500

Docket No.: A0312/7393  
Date: September 5, 2002

x10/31/02



COPY OF PAPERS  
ORIGINALLY FILED

Attorney Docket No.: A0312/7393 SJH

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

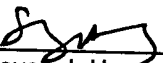
Applicant: Geoffrey T. Haigh and Baoxing Chen  
Serial No: 09/838,520  
Confirmation No.: 9453  
Filed: April 19, 2001  
For: NON-OPTICAL SIGNAL ISOLATOR

Examiner: R. Deberadinis  
Art Unit: 2836

RECEIVED  
SEP 20 2002  
TECHNOLOGY CENTER 2800

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, Washington, D.C. 20231, on the 5th day of September, 2002.

  
Steven J. Henry  
Reg. No. 27,900

COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231


Transmitted herewith are the following documents:

- ☒ Request for Reconsideration
- ☒ Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 720-3500, Boston, Massachusetts.

No check is enclosed to cover the filing fee. If the fee is insufficient, the balance may be charged to the account of the undersigned, Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully Submitted,

  
Steven J. Henry  
Reg. No. 27,900  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, MA 02210-2211  
(617) 720-3500

Docket: A0312/7393  
Date: September 5, 2002

x10/31/02